Bruhat Bangalore Mahanagara Palike
Excecutive Engineer Yelahanka Division

Work: Improvements to roads and drains balance main and cross roads of B sector in ward No. 04

					Estimate Cost Rs.			150.00 Lakhs
Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Raising & Refixing Stone Slabs of drains and Pointing in C.M(1:3). (Page No 25., I.No.5.33 of KPWD 2006-07)								
	76.00							
	8.36							
	84.36							
	5.06							
	89.42							
	2	45.00	1.00		90.00			
	2	414.00	1.00		828.00			
	2	290.00	1.00		580.00			
	2	97.00	1.00		194.00			
	2	118.00	1.00		236.00			
	2	126.00	1.00		252.00			
	2	108.00	1.00		216.00			
	2	165.00	1.00		330.00			
(service rd)	2	153.00	1.00		306.00			
	2	112.00	1.00		224.00			
	2	475.00	1.00		950.00			
	2	140.00	1.00		280.00			
to temple	2	225.00	1.00		450.00			
	2	45.00	1.65		148.50			
	2	414.00	1.65		1366.20			
	2	290.00	1.65		957.00			
	2	97.00	1.65		320.10			
	2	118.00	1.65		389.40			
	2	126.00	1.65		415.80			
	2	108.00	1.65		356.40			
	2	165.00	1.65		544.50			
(service rd)	2	153.00	1.65		504.90			
	2	112.00	1.65		369.60			
	2	475.00	1.65		1567.50			
	2	140.00	1.65		462.00			
to temple	2	225.00	1.65		742.50			
Total Qty					**13080.40**			
30% of total Qty					**3924.12**			
					3924.12	**Sqm**	**89.42**	**350901.09**
precast slab of 100 mm thick including cost of all materials, labour, transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data								
	2100.00							
Total qty of Item no - precast slab					272.60			
					272.60	Sqm	2100.00	572460.00

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
...ing granite slabs of selected quality roughly dressed and fixed in cement mortar (1:6) including ...curing etc., complete. 7.5cm thick (Page No 25., I.No.5.31.1 of KPWD S.R 2016-17).								
...rate	628.00							
...D-HOC	69.08							
...Total-1	697.08							
...ow	41.82							
...Total-2	738.90							
...ter 14% of Total qty of ...-1					1831.26			
					1831.26	**Sqm**	**738.90**	**1353123.85**
...300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal ...upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly ...d, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. ...Chapter 3 (Page No142., I.No.19.1 of KPWD S.R 2016-17).								
...rate	82.00							
...D-HOC	9.02							
...Total-1	91.02							
...ow	5.46							
...Total-2	96.48							
...t & lt, transport	100.00							
...Total-3	196.48							
...road	2	45.00	0.50	0.50	22.50			
...main	2	414.00	0.50	0.50	207.00			
...cross	2	290.00	0.50	0.50	145.00			
...opticals	2	97.00	0.50	0.50	48.50			
...cross	2	118.00	0.50	0.50	59.00			
...main	2	126.00	0.50	0.50	63.00			
...cross	2	108.00	0.50	0.50	54.00			
...main	2	165.00	0.50	0.50	82.50			
...cross (service rd)	2	153.00	0.50	0.50	76.50			
...main	2	475.00	0.50	0.50	237.50			
...ut portion								
...road	1	45.00	1.00	0.35	15.75			
...main	1	414.00	1.00	0.35	144.90			
...cross	1	290.00	1.00	0.35	101.50			
...opticals	1	97.00	1.00	0.40	38.80			
...cross	1	118.00	1.00	0.40	47.20			
...main	1	126.00	1.00	0.40	50.40			
...cross	1	108.00	1.00	0.40	43.20			
...main	1	165.00	1.00	0.40	66.00			
...cross (service rd)	1	153.00	1.00	0.40	61.20			
...main	2	475.00	1.20	0.40	456.00			
...naches	15	10.00	5.00	0.40	300.00			
...t	4	8.00	1.50	1.00	48.00			
					2368.45	**Cum**	**196.48**	**465355.90**
...4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ ...kg. with 40mm and down size graded granite metal coarse aggregates @ 0.892cum and fine ...gates @ 0.465cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well ...acted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing ...ete as per specifications.Specification No.KBS 4.1, 4.2 (P.12/I.4.2)/ PWD SR 2016-17								

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
rate	5046.00							
HOC	555.06							
tal-1	5601.06							
	336.06							
tal-2	5937.12							
	4	8.00	1.50	0.15	7.20			
					7.20	**Cum**	**5937.12**	**42,747.29**
3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones m. apart in each course including cost of materials, labour, curing complete as per ifications. KBS 5.1.13 (P.23/I.5.9)/ PWD SR 2016-17								
rate	5005.00							
HOC	550.55							
tal-1	5555.55							
	333.33							
tal-2	5888.88							
	8	8.00	0.45	0.70	20.16			
					20.16	**Cum**	**5888.88**	**118719.88**
4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ with 20mm and down size graded granite metal coarse aggregates at 0.78cum and fine gates at 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms.thick, well ected, in foundation, plinth and cills including cost of all materials, labour, HOM of machinery, complete as per specifications. Specification No. KBS 4.1,4.2. (P.No.12, I.No.4.6 of PW, P&IWTD 5-17)								
rate	5441.00							
HOC	598.51							
tal-1	6039.51							
	362.37							
tal-2	6401.88							
	8	8.00	0.45	0.10	2.88			
					2.88	**Cum**	**6401.88**	**18,437.42**
precast slab of 250 mm thick including cost of all materials, labour, transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge-								
rate	5111.00							
	4	8.00	1.50		48.00			
					48.00	**Sqm**	**5111.00**	**245328.00**
W400-6.1. Construction of granular sub-base by providing close graded material, crushed stone gates of granite/trap/basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed rial to work site, spreading in uniform layers with motor grader on prepared surface and acting with vibratory power roller to achieve the desired density, complete as per specifications. ent Mix Method.Close graded granular sub-base material as per 400-1 For Grading- II Material No 155., I.No.20.4.2 of KPWD S.R 2016-17).								
rate	1571.00							
HOC	172.81							
tal-1	1743.81							
	104.63							
tal-2	1848.44							
ut portion								
oad	1	45.00	1.00	0.15	6.75			
main	1	414.00	1.00	0.15	62.10			
cross	1	290.00	1.00	0.15	43.50			

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
opticals	1	97.00	1.00	0.15	14.55			
cross	1	118.00	1.00	0.15	17.70			
main	1	126.00	1.00	0.15	18.90			
cross	1	108.00	1.00	0.15	16.20			
main	1	165.00	1.00	0.15	24.75			
cross (service rd)	1	153.00	1.00	0.15	22.95			
main	2	475.00	1.20	0.15	171.00			
naches	15	10.00	5.00	0.15	112.50			
					510.90	**Cum**	**1848.44**	**944367.28**
M400- Wet Mix Macadam - KSRRB M400-17. Providing, laying, spreading and compacting stones aggregate to wet mix macadam specifications including pre mixing the material with at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform with paver in sub-base/base course on well prepared surface and compacting with vibratory to achieve the desired density complete as per specifications. MORTH Specification No. 406 058 I.No.20.18)								
rate	1668.00							
HOC	183.48							
tal-1	1851.48							
	111.09							
tal-2	1962.57							
Cut portion								
oad	1	45.00	1.00	0.225	10.13			
main	1	414.00	1.00	0.225	93.15			
cross	1	290.00	1.00	0.225	65.25			
opticals	1	97.00	1.00	0.225	21.83			
cross	1	118.00	1.00	0.225	26.55			
main	1	126.00	1.00	0.225	28.35			
cross	1	108.00	1.00	0.225	24.30			
main	1	165.00	1.00	0.225	37.13			
cross (service rd)	1	153.00	1.00	0.225	34.43			
main	2	475.00	1.20	0.225	256.50			
naches	15	10.00	5.00	0.225	168.75			
					766.35	**Cum**	**1962.57**	**1504014.60**
and applying primer coat with ss bitumen emulsion on prepared surface of granular base WMM including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using anical means complete as per specifications. MORTH Specification No.502 (P.No.160/It No.21.6)								
rate	26.00							
HOC	2.86							
tal-1	28.86							
	1.73							
tal-2	30.59							
Cut portion								
oad	1	45.00	1.00		45.00			
main	1	414.00	1.00		414.00			
cross	1	290.00	1.00		290.00			
opticals	1	97.00	1.00		97.00			
cross	1	118.00	1.00		118.00			
main	1	126.00	1.00		126.00			
cross	1	108.00	1.00		108.00			
main	1	165.00	1.00		165.00			
cross (service rd)	1	153.00	1.00		153.00			

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
B main - nxt to park	1	90.00	1.00		90.00			
B cross	1	100.00	1.00		100.00			
B main	1	101.00	1.00		101.00			
B main	2	475.00	1.20		1140.00			
reaches	15	10.00	5.00		750.00			
file correction								
road	1	45.00	2.40		108.00			
B main	1	414.00	2.10		869.40			
B cross	1	290.00	2.00		580.00			
eeti opticals	1	97.00	3.00		291.00			
B cross	1	118.00	2.70		318.60			
B main	1	126.00	2.50		315.00			
B cross	1	108.00	2.00		216.00			
B main	1	165.00	1.80		297.00			
B cross (service rd)	1	153.00	2.50		382.50			
B main	1	475.00	2.20		1045.00			
					8119.50	Sqm	30.59	248388.50

M500- 15. Providing, laying dense graded bituminous macadam using 40/60 TPH capacity P with Mechanical paver Gr-II (50mm to 75mm), crushed aggregates of specified grading mixed with 4.5% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying the required level and grade, rolling with smooth wheeled, vibratory and tandem rollers to achieve desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications MORTH Specification No.507 (P.No.162&163 It.No.21.17.6)

rate	6717.00							
AD-HOC	738.87							
Total-1	7455.87							
	447.35							
Total-2	7903.22							
Cut portion								
road	1	45.00	1.00	0.05	2.25			
main	1	414.00	1.00	0.05	20.70			
cross	1	290.00	1.00	0.05	14.50			
opticals	1	97.00	1.00	0.05	4.85			
cross	1	118.00	1.00	0.05	5.90			
main	1	126.00	1.00	0.05	6.30			
cross	1	108.00	1.00	0.05	5.40			
main	1	165.00	1.00	0.05	8.25			
cross (service rd)	1	153.00	1.00	0.05	7.65			
main	2	475.00	1.20	0.05	57.00			
reaches	15	10.00	5.00	0.05	37.50			
correction								
road	1	45.00	2.40	0.05	5.40			
main	1	414.00	2.10	0.05	43.47			
cross	1	290.00	2.00	0.05	29.00			
opticals	1	97.00	3.00	0.05	14.55			
cross	1	118.00	2.70	0.05	15.93			
main	1	126.00	2.50	0.05	15.75			
cross	1	108.00	2.00	0.05	10.80			
main	1	165.00	1.80	0.05	14.85			
cross (service rd)	1	153.00	2.50	0.05	19.13			
main	1	475.00	2.20	0.05	52.25			

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
					391.43	**Cum**	**7903.22**	**3093518.75**
500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH specification clause (P.No.161 & I.No.21.2)								
rate	3.00							
AD-HOC	0.33							
Total-1	3.33							
	0.20							
Total-2	3.53							
road	1	45.00	5.80		261.00			
main	1	414.00	6.20		2566.80			
cross	1	290.00	6.60		1914.00			
opticals	1	97.00	5.80		562.60			
cross	1	118.00	6.50		767.00			
main	1	126.00	6.10		768.60			
cross	1	108.00	5.70		615.60			
main	1	165.00	6.00		990.00			
cross (service rd)	1	153.00	6.30		963.90			
main	1	475.00	7.00		3325.00			
					12734.50	**Sqm**	**3.53**	**44,950.24**
500-7:Providing and applying tack coat with bitumen emulsion using 80/100 grade bitumen on the prepared black toped suface at 2.5kg per 10 sqm, heating bitumen in boiler fitted with set (Excluding cleaning of road surface) including cost of all materials, labour, HOM of neries complete as per Specifications.(P.No.160 & I.No.21.7)								
rate	11.00							
AD-HOC	1.21							
Total-1	12.21							
	0.73							
Total-2	12.94							
road	1	45.00	5.80		261.00			
main	1	414.00	6.20		2566.80			
cross	1	290.00	6.60		1914.00			
opticals	1	97.00	5.80		562.60			
cross	1	118.00	6.50		767.00			
main	1	126.00	6.10		768.60			
cross	1	108.00	5.70		615.60			
main	1	165.00	6.00		990.00			
cross (service rd)	1	153.00	6.30		963.90			
main	1	475.00	7.00		3325.00			
					12734.50	**Sqm**	**12.94**	**164817.54**
M500- 15. Providing, laying bituminousConcrete using 40/60 THP capacity H.M.P with chanical paver Gr-II (30mm to 45mm), crushed aggregates of specified grading premixed with 5.4% grade bituminous binder and , transporting the hot mix to work site , laying to the required level grade,rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired paction as per MORTH Specification clause No.500.9 complete in all respects complete as per cifications MORTH Specification No.509 (P.No.164 Item No.21.22.6)								
rate	7659.00							
AD-HOC	842.49							
Total-1	8501.49							
	510.09							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Total-2	9011.58							
road	1	45.00	5.80	0.04	10.44			
main	1	414.00	6.20	0.04	102.67			
cross	1	290.00	6.60	0.04	76.56			
opticals	1	97.00	5.80	0.04	22.50			
cross	1	118.00	6.50	0.04	30.68			
main	1	126.00	6.10	0.04	30.74			
cross	1	108.00	5.70	0.04	24.62			
main	1	165.00	6.00	0.04	39.60			
cross (service rd)	1	153.00	6.30	0.04	38.56			
main	1	475.00	7.00	0.04	133.00			
					509.38	**Cum**	**9011.58**	**4590318.31**
viding and fixing pre cast solid **cement concrete kerb stones** made out of CC 1:2:4 with top and om width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 ering and finishing cutting including formwork, curing, including cost of materials, labour charges machinery, loading and unloading, lead and lift, transportation ete.,complete (P.No-25, I No-5.30)								
rate	313.00							
HD-HOC	34.43							
Total-1	347.43							
W	20.85							
Total-2	368.28							
main	2	75.00			150.00			
cross	2	40.00			80.00			
cross	2	25.00			50.00			
main	2	44.00			88.00			
cross	2	15.00			30.00			
main	2	30.00			60.00			
0.45				A	**458.00**			
				B	**1018.00**	**Nos**	**368.28**	**374904.76**
800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved es on new plastered concrete surfaces, with materials, labour complete as per specifications. RTH Chapter 8 (P.No-183, I No-24.1)								
rate	60.00							
HD-HOC	6.60							
Total-1	66.60							
W	4.00							
Total-2	70.60							
main	2	200.00	0.35		140.00			
cross	2	150.00	0.35		105.00			
cross	2	90.00	0.35		63.00			
main	2	80.00	0.35		56.00			
cross	2	50.00	0.35		35.00			
main	2	160.00	0.35		112.00			
					511.00	**Sqm**	**70.60**	**36,074.56**
M800-13: Road marking with hot applied thermoplastic compound with reflect rising glass s on bituminous surface- providing and laying of hot applied thermoplastic compound 2.5 mm including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of ce to level, uniform and free from streaks and holes complete as per specifications. MORTH fication No. 803, No. 1974 (P.No.185 & I.No.24.15)								

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
rate	512.00							
AD-HOC	56.32							
Total-1	568.32							
	34.10							
Total-2	602.42							
road	2	45.00	0.10		9.00			
main	2	414.00	0.10		82.80			
cross	2	290.00	0.10		58.00			
opticals	2	97.00	0.10		19.40			
cross	2	118.00	0.10		23.60			
main	2	126.00	0.10		25.20			
cross	2	108.00	0.10		21.60			
main	2	165.00	0.10		33.00			
cross (service rd)	2	153.00	0.10		30.60			
main	2	475.00	0.10		95.00			
					398.20	Sqm	602.42	239883.33
M800 Road markers / Road stud KSRRB M800-35. Providing and fixing of road stud 100x 100 diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in table bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per ifications.(P.No-189,I No-24.41)								
rate	339.00							
AD-HOC	37.29							
Total-1	376.29							
	22.58							
Total-2	398.87							
		2759.00			5518.00			
m interval					919.67	Nos	398.87	366825.05
							Total Construction Cost	14775136.35
							DPR & PMC Charges	224800.00
							Sub Total	14999936.35
							Utility Shifting, Miscellaneous, Rounding off	63.65
							GRAND TOTAL	15000000.00

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The workspot was inspected and works is found to be necessary.

The area comes within the Bruhat Bangalore Mahanagara Palike limits.

The rates adopted based on the PWD SR,Bangalore circle for year 2016-2017, issue rates and Data Rates.

Assistant Engineer

Asst. Executive Engineer,

Executive Engineer,
Yelahanka Division,
BBMP Bangalore
7/2/18

Administrative Approval
Accorded For 150.00 Lakhs
Head of A/C P-2415
CER NO : 639/17-18 Dt: 08/02/2018
E.E. (Project)

Technical Sanction
Accorded For 150.00 lakhs
Head of A/C P-2415
CER NO : 643 Dt: 08/2/2018
TA CE (YNK)